IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~Circuit~~ A circuit for providing power to a load with a pre-determined specification, comprising:

[[-]] a transformer having a primary winding and a secondary winding, said secondary winding being part of a resonant circuit;

[[-]] first and second load connection nodes for coupling of the load in series to the secondary winding;

[[-]] a switch coupled in series to the primary winding, an on-time and an off-time of the switch being controllable by a control element, for generating a voltage pulse over the primary winding; and

~~characterized in that~~ a diode ~~is~~ directly coupled in parallel to the primary winding for demagnetizing the transformer during the off-time of the switch, the on-time and the off-time of the switch

being predetermined.

2. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, ~~characterized in that~~ further comprising a capacitor ~~is added~~ connected in parallel to the secondary winding for adjusting ~~the~~ a resonance period of the resonant circuit.

3. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, ~~characterized in that~~ wherein the transformer has a couple factor which is smaller than one.

4. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein ~~a control element is added to control the switch, characterized in that~~ the control element is selected to cause the on-time of the switch to be at least half of ~~the~~ a resonance frequency of the resonant circuit.

5. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein ~~a control element is added to control the switch, characterized in that~~ the control element is selected to cause the

off-time of the switch to be sufficient to reduce ~~the~~ a current in the diode to substantially zero during demagnetization of the transformer.

6. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, ~~characterized in that~~ further comprising a resistor ~~is~~ connected in series to the diode to reduce the ~~necessary switch~~ off-time.

7. (Currently Amended) ~~Method~~ A method for providing power to a load, comprising the ~~steps~~ acts of:

[[-]]applying a number of voltage pulses to a primary winding of a transformer so as to produce each time a high-voltage pulse on ~~the~~ a secondary winding ~~thereof~~ of the transformer, ~~which~~ wherein the high-voltage pulse is shaped by ~~the~~ transformer inductances and capacitances at ~~the~~ a secondary side of the transformer to create a load pulse;

[[-]] applying the load pulse to the load; and

~~characterized in that~~ providing, between every application of a voltage pulse, a current path through a diode directly connected between the primary winding for ~~the~~ primary current ~~is provided~~ so

that the transformer is demagnetized and saturation of the transformer is prevented.

8.(Currently Amended) ~~Method~~ The method according to claim 7, wherein the load is a high-intensity discharge lamp, ~~characterized in that~~ the method further comprising the acts of:

applying a first series of pulses ~~is applied~~ to ignite said high-intensity discharge lamp, ~~whereupon~~ and

applying a second series of pulses ~~is applied~~ to operate the high-intensity discharge lamp during ~~the~~ an electrode heating phase of said high-intensity discharge lamp.

9.(Currently Amended) ~~Method for optimizing the parameters of the~~ The circuit according to claim 1, ~~characterized in that~~ further comprising:

[[-]] means for determining a ~~the~~ maximum oscillation period of the resonant circuit ~~is determined on the basis of the~~ based on a maximum value of ~~the~~ a capacitance at ~~the~~ a secondary side of the transformer when ~~a~~ the load is connected;

[[-]] means for choosing the on-time of the switch ~~is chosen~~

to be higher that half of said maximum oscillation period.

10. (Currently Amended) ~~Method for optimizing the parameters of the~~ The circuit according to claim 1, ~~characterized in that~~ wherein the off-time of the switch is chosen to be higher than ~~the~~ a time necessary to reduce ~~the~~ a current through the diode to substantially zero.

11. (Currently Amended) ~~Method for optimizing the parameters of the~~ The circuit according to claim 1, ~~characterized in that the~~ further comprising:

means for calculating a mean value of ~~the~~ a short-circuit current over the on-time and the off-time of the switch ~~is calculated~~ for a range of couple factors, ~~whereupon the~~ and

means for selecting a couple factor for which ~~this~~ the mean value is minimal ~~is selected~~.

12. (New) A circuit for providing power to a load comprising:

a transformer having a primary winding and a secondary winding, the load being connected to the secondary winding;

a switch coupled to the primary winding, an on-time and an off-time of the switch being controllable by a control element, for generating a voltage pulse over the primary winding; and

a diode directly connected in parallel to the primary winding for demagnetizing the transformer during the off-time of the switch.

13. (New) The circuit of claim 12, further comprising a capacitor connected in parallel to the secondary winding for adjusting a resonance period of a resonant circuit associated with the secondary winding.

14. (New) The circuit of claim 12, wherein the transformer has a couple factor which is smaller than one.

15. (New) The circuit of claim 12, wherein the control element is selected to cause the on-time of the switch to be at least half of a resonance frequency of a resonant circuit associated with the secondary winding.

16. (New) The circuit of claim 12, wherein the control element is selected to cause the off-time of the switch to be sufficient to reduce a current in the diode to substantially zero during demagnetization of the transformer.

17. (New) The circuit of claim 12, further comprising a resistor connected in series with the diode to reduce the off-time.

18. (New) The circuit of claim 12, wherein the control element is configured to control the switch to provide a voltage pulse to the primary winding only if a free-running current through the diode is substantially zero.